

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
19 August 2004 (19.08.2004)

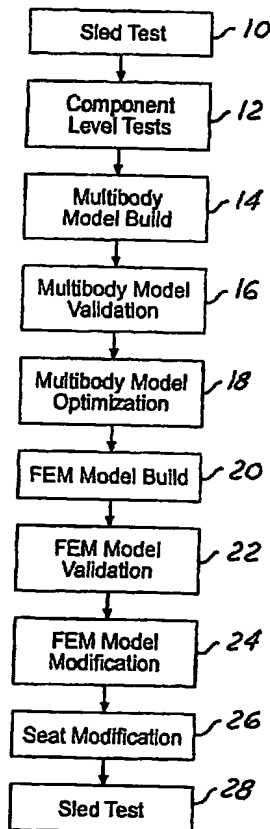
PCT

(10) International Publication Number
WO 2004/069583 A2

- (51) International Patent Classification⁷: **B60N**
- (21) International Application Number:
PCT/US2004/002952
- (22) International Filing Date: 3 February 2004 (03.02.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/444,534 3 February 2003 (03.02.2003) US
- (71) Applicant (for all designated States except US): **INTIER AUTOMOTIVE INC** [US/US]; 337 Magna Drive, Aurora, Ontario L4G 7K1 (CA).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **REED, Steven, James** [US/US]; 8835 McGregor Lane, Pinckney, MI
- (74) Agents: **ASHER, Robin, W.** et al.; Clark Hill PLC, Suite 3500, 500 Woodward Avenue, Detroit, MI 48226-3435 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: METHOD OF DESIGNING AUTOMOTIVE SEAT ASSEMBLIES FOR REAR IMPACT PERFORMANCE



(57) Abstract: A method for designing automobile seat assemblies in which a sled test is run on a prototype seat assembly in order to obtain the necessary data to model the seat assembly with simulation software. A basic model of the surface of the seat assembly is built utilizing simulation software and tests are run on various parameters to determine those that are most significant to the desired objective of the design process. Thereafter, the software is used to build a detailed model of the seat assembly and all its elements and the significant parameters are tested further to determine those that are again most significant to achieving the desired outcome. Once optimization ranges for those most significant parameters are chosen, the prototype seat assembly is modified accordingly. A final sled test is run on the modified prototype to verify the results and compare those results with the original sled test results.

WO 2004/069583 A2



GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *without international search report and to be republished upon receipt of that report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.